

LEDI® NETWORK ITS v2m



High Accuracy secure time Server with triple synchronization redundant inputs and with multiple synchronization outputs.



Internal time base

Its internal battery and its oscillator allow to provide stable time code output in case of synchronization or power supply failure.

Three quartz oscillators at choice:

	OCXO LN	OCXO	TCXO
frequency	5.10 ⁻¹⁰	1.10 ⁻⁹	1.10 ⁻⁶
stability	(-10°C to 60°C)	(-20°C to 70°C)	(0°C to 60°C)
Ageing	3.10 ⁻¹⁰ / day	5.10 ⁻¹⁰ / day	2.10 ⁻⁹ / day

Security

- **Back up power is included by default. Possibility of extended back up power capacity** (see reference table 92167/). The duration of power reserve will depend on the configuration of the time server, please contact our sales team for more details.
- **Backup configuration settings in flash memory**
- **High level of security: 64 bits RSA™ MD5 signature, HTTPS, prompt console** via secure SSH protocol
- Supervision possible via SNMP software (Version 3) and syslog
- Upgrades by SCP protocol

Network protocols

- **NTP (v2, v3, v4)**
- NTP Client/Server, Broadcast, Multicast
- SNTP (v4)
- HTTPS
- **SNMP (v1, v2c, v3)**
- IPv4 / **IPv6** (DHCP v4 / v6 compatible)
- FTP / SCP
- SYSLOG
- PTPv2 IEEE 1588 (TELECOM, ENERGY profiles)

Specifications

Power Supply	110-250 VAC – 50/60Hz - type IEC 60320 defined C14 And 18-36 VDC or 36-72VDC – screw terminal block
Power Cable	IEC 60320 defined C13 / MALE SCHUKO 2 (EUROPE) & (Type F)*
Certifications	CE, EN62368 (safety), EN 55032 (EMC transmission), EN 55035 (EMC immunity), ROHS
Max. consumption	20 VA
IP	31
MTBF	110 000 h
MTTR	Mother board: 10 min Display board: 5 min Output board: 5 min
Weight	2.3 kg (Standard configuration)
Dimensions	19" 1U Rack. 482x44x266 mm (LxHxD)
Display	4 x 20 orange OLED screen with backlight
Operating temperature	-10° to 50°C
Storage temperature	-20° to 70°C
Maximum operating / storage altitude	3 500 m (11 483 ft)

*For other types of power cables, refer to the power cable reference table

Key features

- **Power Supply Redundancy 18-36 or 36-72 VDC with 110-250 VAC**
- **Configurable priorities of synchronization inputs.**
- **Compensation of input delay due to transmission distance and threshold setting for security**
- Time Base and algorithm ensuring output accuracy up to 50ns when synchronized to GPS/GNSS
- **Multiple synchronization outputs of different types de time code**
- Time can be configured individually on each output, via DST and Offset
- PPS and 10Mhz output (available with OCXO oscillator only) via BNC connectors.
- **Alarm management via SNMP TRAP and two static relay outputs on screw terminal for synchronization and power supply alarms**
- **Manual or automatic adjustment for transmission delay.**
- **System Event Journal.**
- **Operational within 1 minute.**
- **Local or UTC time on the digital display**
- **Configurable dry contacts to loss of synchronization or power supply alerts**

Configuration

- **Remote configuration and time setting via web interface. (secured connexion via HTTPS available) and by SNMPv3**
- IP configuration by front panel buttons
- Supervision Information available via HTTP/ HTTPS, SNMPv3, Telnet, "GT Network Manager", "GT Ethernet Supervision". Time and synchronisation status is available on the alphanumerical front display
- Firmware upgrade via FTP or SCP (Secure Copy Protocol)
- **1 NTP output (RJ45) is included in the basic configuration**

Synchronization Inputs

- **1st time reference input (at choice):**
 - Multi-constellation GNSS Receiver: (GPS, GLONASS, BEIDOU, GALILEO) or GPS ; Cold start, accuracy 10 to 50 ns
 - ASCII (NMEA 0183 RMC or ZDA) + TOP
- **2nd time reference input (at choice):**
 - AFNOR NFS 87500/IRIG B/ IEEE1344
 - NTPv4 Ethernet 10/100BaseT (RJ45 connector)
- **3rd reference input (backup) :**
 - PPS input
 - Frequency input (between 1kHz and 10MHz)

Synchronization Outputs

- Provided with 1 SDHC memory card for main NTP output
- Multiple outputs (see reference table 92167/)
- 1 NTP/SNTP output is included in the basic configuration.

Antennas

- For more information on our GNSS antennas, refer to the technical specifications (see reference table 92225/)



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ITEM CODE

92167 /

1 st SYNCHRONIZATION INPUT										
⁽¹⁾ GNSS multiconstellations (GPS, GLONASS, BEIDOU, GALILEO)	■	B								
⁽¹⁾ GPS Receiver (Antenna and cable not included)	■	P								
ASCII (auto-detection NMEA 0183 RMC or ZDA) + Top	■	T								
TOP (PPS)	■	M								
Without	■	0								
<i>(1) Antenna and cable to be ordered separately, see table 92225/</i>										
2 nd SYNCHRONIZATION INPUT										
AFNOR NFS 87500/IRIG B (Modulated 1KHz – 12x)	■	8								
IRIG B DCLS (No modulation 00x)	■	T								
NTP	■	N								
Without	■	0								
3 rd SYNCHRONIZATION INPUT										
Without	■	0								
⁽²⁾ External frequency input 10MHz	✗	H								
<i>(2) Frequency Input: only available with OCXO oscillator, 1 other required input</i>										
POWER SUPPLY										
110-250 VAC 50/60Hz / 18-36 VDC	■					5				
110-250 VAC 50/60Hz / 36-72 VDC	■					8				
OSCILLATOR										
TCXO, 1PPS output (BNC)	■							T		
OCXO, PPS and 10 MHz output (BNC)	■							X		
OCXO LN, PPS and 10 MHz output (BNC)	■							Y		
BACKUP BATTERY POWER										
Without	■								0	
Backup battery power NiMh (in average 1h)	■								1	
Extended Backup battery power NiMh (in average 2h)	■								2	
⁽³⁾ SYNCHRONIZATION OUTPUTS										
<i>(3) max. 3 output board</i>										
4 x AFNOR NFS 87500/IRIGB IEEE1344 (12x version) AC 2,2V outputs on screw terminal block	■									B
1 x ASCII RS232 output on DB9 + TOP on screw terminal block (Protocoles selection on embedded web page)	■									E
1 x ASCII RS485 output on DB9 + TOP on screw terminal block (Protocoles selection on embedded web page)	■									F
1 x PTPv2 IEEE 1588 output (1 x RJ45 1Gbit/s and 1 x SFP connector optical fibre) + 1 x RJ45 management connector (10/100Mbit/s) 8 clients for 128 req/sec.	■									C
1 x NTP V4/SNTP server output on RJ45	■									K
2 x NTP V4/SNTP server outputs on RJ45	■									L
4 x IRIG B AC 8,8V outputs on screw terminal (12x version)	■									H
4 x PPS, PPM, PPH, PP2S, DCF (TTL, phototransistor, DTTL) outputs on screw terminal block	■									P
4 x PPS, PPM, PPH, PP2S, DCF (TTL, static relay, DTTL) outputs on screw terminal block	■									Q
4 x AFNOR/IRIG B/IEEE1344 DCLS (00x version) (TTL, phototransistor, DTTL) outputs on screw terminal block	■									T
4 x AFNOR/IRIGB/IEEE1344 DCLS (00x version) (TTL, relais statique, DTTL) outputs on screw terminal block	■									V
4 x ASCII RS 232 unidirectional outputs on DB9 (Unique Protocole)	■									A
4 x ASCII RS 485/RS 422 unidirectional outputs on DB9 (Unique Protocole)	■									R
SMPTE / EBU output module SMPTE LTC12M –1999 and EBU/ UER LTC 3097 XLR 3 pts	■									S
Blackburst / Genlock synchronization input on BNC	■									
Tropicalization	■									U

NTP/SNTP client software Windows®. 10 licenses.
This option is required for a secure synchronization of PC under Windows.

NTP/SNTP client software Compatibles OS Windows® 10 licenses <input type="checkbox"/>	CDG021
Additional SDHC memory card for other NTP outputs <input type="checkbox"/>	ref.PCB0036A